

REMARKS

Claims 1-7 are pending in this application. By this Amendment, claims 1 and 3-7 are amended for further clarity only. No new matter is added.

The courtesies extended to Applicants' representative by Examiners Ramadan and Vu at the interview held on April 23, 2008 are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below.

The Office Action rejects claims 1-7 under 35 U.S.C. §103(a) over Kawai (JP 2002-334712) in view of Haniyu (JP 10-319054). This rejection is respectfully traversed.

On p. 3, the Office Action admits that Kawai does not disclose determining the offset correction value for said current detector by setting the output terminal voltage of said fuel cell to the open circuit voltage via said voltage converter. Nevertheless, the Office Action asserts that Haniyu supplies the subject matter missing from Kawai. However, Applicants respectfully submit that Haniyu does not disclose or suggest setting an output terminal voltage of said fuel cell to an open circuit voltage via said voltage converter, as recited in claim 1, and similarly recited in claims 6 and 7.

The Office Action cites paragraph [0016] as disclosing the recited subject matter.¹

The machine language translation of paragraph [0016] states:

"So, by the offset voltage amendment approach of the current sensor of this invention, in the output voltage of a current sensor, the maximum output electrical potential difference in

¹ During the personal interview, Examiner Ramadan relied upon paragraph [0025], which is replete with grammatical errors rendering its exact meaning uncertain. We were forced to obtain a better translation of paragraph [0025] (enclosed) to understand its disclosure. However, we are uncertain as to whether other passages of Haniyu may be more relevant than paragraph [0025]. Accordingly, Applicants respectfully request that the Patent Office provide a better translation of all of Haniyu. In this regard, Applicants note that MPEP §706.02 II states in part "[i]f the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection" (emphasis added).

zero is considered as a part for correction voltage, and the current which flows to a current sensor at least shifts the output voltage of a current sensor by this correction voltage, and makes the polarity of output voltage the same polarity[.]" (emphasis added)

However, although this passage includes the keyword "output voltage", that phrase does not refer to an output voltage of said fuel cell, as recited in claim 1 (and similarly recited in claims 5 and 6), but rather refers to the output voltage of a current sensor. As discussed in the personal interview, and as is well known to one of ordinary skill in the art, the output voltage of a current sensor is not the voltage on the line where the current sensor senses. Thus, paragraph [0016] does not disclose or suggest setting an output terminal voltage of said fuel cell to an open circuit voltage via said voltage converter, as recited in claim 1, and similarly recited in claims 6 and 7.

During the personal interview, Examiner Ramadan cited paragraph [0025]² as disclosing the recited subject matter. The machine language translation of paragraph [0025] states:

"the electrical-potential-difference compensator 2 -- the outgoing end electrical potential difference V0 of a current sensor 1 -- correction voltage Vs it adds, and by this, when the current which flows to a current sensor 1 is zero, an output V1 serves as a forward electrical potential difference -- as -- the output V0 of a current sensor 1 -- correction voltage Vs only - it shifts." (emphasis added)

As Drawing 1 makes clear, paragraph [0025] discloses that electrical-potential-difference compensator 2 alters the output voltage V1 of current sensor 1 by correction voltage Vs. However, this passage does not disclose the recited subject matter for at least the following reasons. First, Drawing 1 discloses an op-amp between current sensor 1 and electrical-potential-difference compensator 2, which would prevent the voltage shift disclosed

² Paragraph [0025] was newly cited by the Examiner during the personal interview and was not cited in the Office Action.

in paragraph [0025] from setting, on the line being sensed, an output terminal voltage of said fuel cell to an open circuit voltage via said voltage converter, as recited in claim 1, and similarly recited in claims 6 and 7. Second, correction voltage V_s is the output voltage of current sensor 1 detected when the current is zero on the line sensed by the current sensor, and therefore is not a fuel cell open circuit voltage, as recited in claim 1 and similarly recited in claims 6 and 7.

During the personal interview, Supervisory Examiner Vu asserted that Applicants' position, as explained above, may be a "piecemeal" argument which allegedly fails to appreciate that the outstanding rejection is under 35 U.S.C. §103(a) over a combination of references. However, as explained during the personal interview, even if one places the current sensor disclosed in Haniyu in the system disclosed in Kawai, the current sensor would still only shift the output voltage V_1 of the current sensor, as disclosed in paragraph [0025], and not the voltage on the line it senses. As explained above, Drawing 1 clearly shows that output voltage V_1 and the voltage on the line the current sensor senses are distinct.

Further, even if incorrectly assuming that an output voltage of a current sensor can affect an input voltage of the current sensor, changing the input voltage of the current sensor does not inherently change a voltage of an output terminal of the fuel cell. Thus Haniyu does not disclose or suggest setting an output terminal voltage of said fuel cell to an open circuit voltage via said voltage converter, as recited in claim 1, and similarly recited in claims 6 and 7. Accordingly, Haniyu does not supply the subject matter missing in Kawai. Thus, even an alleged combination of both Kawai and Haniyu does not disclose or suggest the subject matter recited in claims 1, 6 and 7.

In view of the above, Kawai and Haniyu, individually or in combination, do not disclose or suggest the subject matter recited in claims 1, 6 and 7. Claims 2-5 ultimately depend from claim 1. Thus, Kawai and Haniyu, individually or in combination, do not

disclose or suggest the subject matter recited in claims 1-7. Withdrawal of the rejection of these claims under 35 U.S.C. §103(a) is respectfully solicited.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-7 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Petition for Extension of Time
Partial Translation of JP 10-319054 to Haniyu

Date: May 14, 2008

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Partial translation of JP 10-319054

[0025] The voltage correction device 2 adds a correction voltage V_s to an output terminal voltage V_0 of the current sensor 1. As a result, even when the current flowing to the current sensor 1 is zero, the output V_0 of the current sensor 1 is shifted by the correction voltage V_s , such that the output V_1 becomes a positive voltage.